N° 202

Evaluation BRIEF

February 2008 POWER

MOZAMBIQUE: ELECTRICITY II PROJECT

Project Performance Evaluation Report (PPER)

Programmes Objectives

Despite the importance of the hydro-power potential of Mozambique which is estimated at 12 500 MW, most of the country's energy requirements are currently met by biomass. The main raison is that the level of accessibility to electric power is only around 6%, the lowest in SADC region. The Government of Mozambique has a policy to develop its hydropower potential and expand the national network to supply adequate and reliable electric power to the various parts of the country. The Bank Group took part in constant way in the development of Mozambique electricity sub-sector with the total intervention in June 2006 at about UA80 million, which is close to 10% of the total interventions of the Bank in Mozambique.

The goal of the energy sector in Mozambique was to make sufficient energy available to the community at economic cost, to promote efficient use of energy by consumers in order to conserve limited energy resources and to build capacity in the sector. The objectives of the Electricity II Project were to (i) Provide least cost and reliable hydropower supply to new rural centres to improve the quality of life of the population and (ii) Improve the quality and reliability of supply in some existing supply centres so as to increase economic activities in the centres.

Physical Outputs

All the stated physical outputs of the project at appraisal were either met or exceeded. The physical outputs of the project include the following: (i) Construction of 88 km length of 66 kV overhead line (Exceeded by 24 km.); (ii) Construction of 398 km length of 33 kV overhead line (Exceeded by 38 km.); (iii) Construction of 223 km low voltage lines (Exceeded by 118 km.); (iv) Connection of 4 600 consumers. (Exceeded by 1 600 customers.); (v) Setting up of one 110/66 kV substation; (vi) Setting up of four 66/33 kV substations; (vii) Erection of 57 33/0.4 kV transformer stations and (viii) Purchasing of six vehicles.

Project Outcomes and Impact

Project benefits include wealth generation, improved social services, foreign investment, industrial development, improved social interaction, contribution to poverty reduction, sustainable energy use, small business development, increased tourism and improvements in the reliability of water supply.

Whilst the economic rate of return was highly satisfactory, the financial rate of return was well below the on-lending rate. The low financial return can be justified by the fact that the project is aimed at mainly rural poor communities where full Long Term Marginal Cost (LTMC) recovery would be impossible. Significant discrepancies were observed between the EIRR and FIRR calculations at appraisal and Project Completion Report (PCR) on the one hand and the PPER on the other, due to fact that the Appraisal Report and PCR overestimated the financial income and underestimated the total project benefits.

The project has significant secondary spin-offs that cannot easily be reflected in the socio-economic analysis. These benefits include the following: (a) Since completion, the line has been extended to a number of tourist lodges through a private-public-partnership agreement. A significant number of rural households could be electrified because of this; (b) The provision of electricity had a significant impact on the voluntary resettlement of people that were displaced during the civil war. The Electricity II project encouraged displaced communities to resettle in towns that they deserted during the civil war and attracted communities to the vicinity of the electricity line where they can get electrical connections.

The environment aspect in particular had been a major issue during design and implementation as the lines had to pass through the Maputo Elephant Reserve where there is some concern about the protection provided for birds. However, the project also had a positive impact on the reserve by enabling an electrified fence to be erected to ensure that the elephants do not wander out of the reserve where they would be vulnerable to poaching. Although, according to Electricidade de Mozambique (EdM), compensation was paid to all affected by the transmission lines, no consultation was made among local communities, and the level of social awareness about environmental issues is still low.

The project reduced reliance on biomass for lighting and cooking, but not to a great extent. It also cannot be claimed that the project had a major effect on health improvement through reduced air pollution as there were only limited use was made of diesel generators for lighting. Wood is also still used for most household cooking, which means that the negative effects of smoke inhalation have not reduced substantially.

Main Lessons

Financial sustainability of rural public utility projects where local residents are unable to afford the full commercial tariff (long term marginal cost tariff) can be improved if the following principles are adhered to: (a) Services cover at least the short term marginal cost and should not be provided at an outright loss or for free; (b) The borrower develops an appropriate financial package to compensate the public utility company for the social services that it provides in areas where full cost recovery is not possible; (c) Electricity supply/generating capacity keeps up with the long term growth in the combined demand of all electricity projects; (d) Institutional development remains an integral component of the project; (e) Loan conditions should specify staff productivity in terms of both staff cost and staff numbers.

Rural electrification projects have significant secondary spin-offs and opportunities which should be investigated and promoted as part of project appraisal process. These include the following: (a) Public-private-partnerships to extend the line and connecting additional users; (b) Positive impacts on rural settlement patterns and land-use.

Possible negative environmental consequences can be minimized or avoided altogether if an environmentalist is included in the appraisal and monitoring processes, even if there are no obvious environmentally sensitive issues at the time of categorisation.

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